

## Milestones and Manpower needs for HCAL/JET/MET group

### Other milestones of interest

Dec 2001 – DAQ TDR

Dec 2003 – Physics TDR

### Physics objects subgroup:

on-going tasks

- coordination and babysitting of production (1.0 FTE)

Jun '01

- update ntuple maker to include e/mu/track information (0.3 FTE)
- algorithms to reduce fake jets (0.5 FTE, Andrei)
- tau's with tracking (1.0 FTE, Sasha)
- HF segmentation in L1 study complete (0.5 FTE, Jim Brooke?)
- MET rate study using MET that includes jet energy corrections (1.0 FTE)

Nov '01

- trigger table that gets good acceptance to tape for higgs to tau, susy to jet/met, and ttbb with hadronic t decays (4.0 FTE, Sasha)

Jun '02

- MET and JET algorithms that include tracking (2.0 FTE)

Nov'02

- 

Jun 03

- completed physics analyses for higgs to tau, susy to jet/met, ttbb with hadronic t decays

Nov 03

Manpower: need about 4 FTE

Andrei, 0.3 FTE

Jim Brooke, 0.5 FTE ???

Sasha, 2.0 FTE ;)

### ORCA/Testbeam subgroup:

on-going tasks

- testing and validation of new versions of ORCA (0.2 FTE, Pal?)

Jun '01

- updated version of ORCA containing "correct" simulation of electronics (0.7 FTE, Salavat) both for DAQ and trigger primitives
- jet algorithms in ORCA updated to include new weights from ITEP/MSU group (0.3 FTE)
- MET object in ORCA (and documentation showing testing) and jet energy corrections in ORCA (and documentation showing testing) (0.3 FTE)
- eta-dependent calibration for L1 into ORCA (0.3 FTE, Sridhara?)

Nov '01

- D0 note describing effect of electronics on HCAL energy resolutions (0.7 FTE)

- User-friendly interface to ORCA (1.0 FTE)
- optimized bunch crossing ID for HCAL trigger primitives (0.5 FTE)

Jun '02

- ORCA-based code for analyzing test beam data (1.0 FTE)
- optimized pedestal subtraction routine for HCAL (1.0 FTE)

Nov '02

- note describing analysis of test beam data (2.0 FTE)

Manpower needs: about 2.5 FTE's

current manpower:

Salavat 0.7 FTE (0.3 FTE on other jet/met activities)

propose Pal to do validation/testing 0.2 FTE

### Simulation subgroup:

on-going tasks

- testing/validation of new versions of CMSIM (0.2 FTE, Pal?)

Jun '01

- web page describing current GEANT3 simulation and showing comparisons with test beam (0.5 FTE)
- note comparing GEANT3 results to CMSJET for jet resolutions and describing in detail contributions to jet energy resolutions (0.5 FTE)
- new HF showerlib in CMSIM (0.5 FTE, Victor)

Nov '01

- working GEANT4 code for HCAL, detailed comparisons to the GEANT3 results, and d0note and web page describing this work (1.0 FTE)
- note comparing GEANT3 results to CMSJET for met resolutions and describing in detail contributions to met resolutions (1.0 FTE)

Jun '02

- 

Nov '02

- comparison of summer '02 test beam results (1.0 FTE)

Jun '03

- retuning of GEANT4 to match test beam (1.0 FTE)

Manpower:

needed: about 2.0 FTE

Victor 0.5 FTE

propose Pal to do testing/validation 0.2 FTE

### Calibration subgroup:

on-going tasks

- new jet calibrations with new versions of CMSIM (0.3 FTE, Andrei)

Jun '01

- L1 calibration for jets
- new weights for offline jets

Nov '01

Jun '02

Nov '02

Manpower